



**2010 SHELLFISH REHABILITATION PROGRAM  
REPORT**

**BY  
N.C. DIVISION OF MARINE FISHERIES  
DEPT. OF ENVIRONMENT AND  
NATURAL RESOURCES**

**TO  
THE JOINT LEGISLATIVE COMMISSION ON  
SEAFOOD AND AQUACULTURE**

**Sept. 15, 2010**

## **SHELLFISH REHABILITATION PROGRAM**

**Section 15.42.** The Oyster Rehabilitation Program in the Division of Marine Fisheries in the Department of Environment, Health, and Natural Resources shall be renamed the Shellfish Rehabilitation Program. Funds appropriated for the Oyster Rehabilitation Program or the Shellfish Rehabilitation Program shall be used for the Shellfish Rehabilitation Program. The Oyster, Clam, and Scallop Subcommittee of the Marine Fisheries Commission shall advise the Division of Marine Fisheries on the expenditure of Shellfish Rehabilitation Program funds. The Division of Marine Fisheries shall report to the Joint Legislative Commission on Seafood and Aquaculture on the expenditure of Shellfish Rehabilitation Program funds annually, beginning January 1, 1998.

Requested by: Representatives Mitchell, Baker, Carpenter

**N.C. Division of Marine Fisheries  
Shellfish Rehabilitation Programs  
Annual Report for 2010**

Calendar year 2010 was the 14th year of operation under the revised Shellfish Rehabilitation Program. The change in the program's focus allows the Division of Marine Fisheries (DMF) to make directed attempts at enhancing hard clam production and habitat. The majority of the program's efforts continued to be directed toward oyster habitat creation.

During the 2010 season a total of 162,625 bushels of oyster shells was planted for oyster habitat enhancement (see table 1 for detailed distributions). The cost to the DMF for the purchase and delivery of cultch material was \$233,618.72. Cultch material was planted in seven of the major oyster-producing counties.

Shellfish Rehabilitation Program expenditures for 2009/2010 were \$2,243,091.81. The procurement of annual cultch material including transportation cost was \$233,618.72 of that total. Salaries and personnel services accounted for \$855,044.08 and operating expenses for the vessels, support equipment and sampling programs made up the remaining \$1,154,429.01.

The low shell availability due to the reduced supply and increased competition from other states and other users reduced the amount of oyster shells procured this season. A request to purchase 154,222 bushels of limestone marl was submitted to compensate for the shortage of oyster shells. The delivery of this material started after the planting season, so it will be held until the 2011 planting season.

The DMF purchased 153,480 bushels of oyster shell which were planted in 2010. An additional 9,145 bushels of oyster shell from the Oyster Shell Recycling Program were planted.

Cultch material expenditures increased from \$179,091.99 in 2008/2009 to \$233,618.72 in 2009/2010, resulting in an increase in cultch material acquired from 135,239 bushels in 2008/2009 to 153,480 bushels in 2009/2010.

**Oyster Sanctuary Program**

The Oyster Sanctuary Program expenditures for 2009/2010 were \$648,678.82. No deployment material was purchased during the 2009/2010 fiscal year due to the surplus from the 2008/2009 fiscal year purchase of 17,992 tons.

There were 9,000 tons of Class B limestone rip rap received in Swan Quarter from November 2008 to January 2009 that was funded by the sales of Coastal Recreation Fishing Licenses. The cost of this material was \$339,750. Deployment of this material on the Gibbs Shoal Oyster Sanctuary began December 1, 2009, with 57 mounds constructed (approx. 8,550 tons) as of August 26, 2010. Each mound contains approximately 150 tons of Class B limestone rip rap.

**Oyster Shell Recycling Program**

For the 2009/2010 oyster shell recycling season 19,736 bushels of oyster shell were collected from 22 counties. Restaurants remained the highest contributors with 9,562 bushels,

followed by public donations totaling 8,289 bushels, and festivals with contributions of 1,885 bushels. The program had a total of 73 restaurants and 127 public recycling locations in 22 different counties.

Tax credit requests for the 2009 tax year totaled 12,616 bushels claimed by 44 businesses and three individuals. The overall budget expenditure for the recycling program was \$32,838.15. The program spent \$11,428.07 on public outreach and education. The program's operational cost was \$21,410.08, which includes comprehensive purchases for fuel, aluminum oyster shell recycling logo and informational signs, equipment maintenance, shell collection cans and materials to build collection bins and travel.

### **Additional Activity**

The North Carolina Coastal Federation (NCCF) received funds from the American Reinvestment and Recovery Act (ARRA) to enhance DMF's oyster sanctuaries and cultch planting sites. The grant amount was \$5 million and the majority of those funds were used to enhance DMF's oyster sanctuaries. The oyster sanctuary enhancement portion of the grant project incorporated the use of contractors to mine, deliver, transport and deploy the material to DMF specifications. The Crab Hole Oyster Sanctuary received an additional 144 (21,668 tons) mounds and the Clam Shoal Oyster Sanctuary benefited from the addition of 209 mounds (31,307 tons). Each mound is constructed from approximately 150 tons of Class B limestone rip rap.

The cultch planting program received an additional 41,810 bushels of oyster shell from the same grant. Fishermen were paid \$2 per bushel to plant these oyster shells on DMF-selected sites. These sites are located in Hyde, Carteret, Onslow and New Hanover counties.

This grant also provided funds for DMF to employ temporary staff and purchase supplies to support these activities.

**Table 1**

<b>2010 Cultch Planting Results</b>					
<b><u>County</u></b>	<b><u>Material Type</u></b>	<b><u>Bushels Planted</u></b>	<b><u>%</u></b>	<b><u>Cost of Purchase and Transport</u></b>	<b><u>%</u></b>
<b>Brunswick</b>	Oyster Shell - Recycled	3,447		\$0.00	
	<b>Total for Brunswick County</b>	<b>3,447</b>	<b>2.12%</b>	<b>\$0.00</b>	<b>0.00%</b>
<b>Carteret</b>	Oyster Shell - Purchased	43,145		\$80,697.83	
	<b>Total for Carteret County</b>	<b>43,145</b>	<b>26.53%</b>	<b>\$80,697.83</b>	<b>34.54%</b>
<b>Dare</b>	Oyster Shell - Purchased	62,447		\$87,430.22	
	<b>Total for Dare County</b>	<b>62,447</b>	<b>38.40%</b>	<b>\$87,430.22</b>	<b>37.42%</b>
<b>New Hanover</b>	Oyster Shell - Recycled	739			
	<b>Total for New Hanover County</b>	<b>739</b>	<b>0.45%</b>		<b>0.00%</b>
<b>Onslow</b>	Oyster Shell - Purchased	34,078		\$50,160.22	
	Oyster Shell - Recycled	4,397		\$0.00	
	<b>Total for Onslow County</b>	<b>38,475</b>	<b>23.66%</b>	<b>\$50,160.22</b>	<b>21.47%</b>
<b>Pamlico</b>	Oyster Shell - Purchased	13,810		\$15,330.45	
	Oyster Shell - Recycled	562		\$0.00	
	<b>Total for Pamlico County</b>	<b>14,372</b>	<b>8.84%</b>	<b>\$15,330.45</b>	<b>6.56%</b>
	<b>State Wide Totals</b>	<b>162,625</b>	<b>100.00%</b>	<b>\$233,618.72</b>	<b>100.00%</b>
<b>Totals</b>					
		<b>Bushels</b>		<b>Cost</b>	
	<b>Oyster Shell - Purchased</b>	<b>153,480</b>		<b>\$233,618.72</b>	
	<b>Oyster Shell - Recycled</b>	<b>9,145</b>			

For the 2010 planting season 153,480 bushels of cultch were purchased and transported at an average cost of \$1.52 per bushel.

### **2011 SHELLFISH REHABILITATION PLANS**

The anticipated funding available for shellfish rehabilitation and oyster sanctuary projects is \$4,445,672 for the 2010/2011 fiscal years. The program focus will continue to concentrate on habitat creation through cultch planting and increased spawning stock biomass and habitat expansion through oyster sanctuary development. The activities proposed for this year's rehabilitation efforts are cultch planting for oyster habitat enhancement, oyster relays, oyster shell

recycling and oyster sanctuary enhancement and monitoring. The enhancement of the estuarine artificial reefs/oyster sanctuaries will continue with the use of funds from multiple sources.

The North Carolina Marine Resources Fund (CRFL sales) has awarded DMF \$951,141 for the deployment of 9,000 tons of Class B limestone rip rap at the Gibbs Shoal Coastal Fishing Reef/Oyster Sanctuary.

Fiscal year 2010/2011 is the third year of new appropriated funding for the Oyster Sanctuary Program. This anticipated funding of \$1,447,316 will be used for operational costs associated with material deployments, monitoring and sampling projects.

DMF's usual appropriated funds for Shellfish Rehabilitation of \$2,047,215 will be used to purchase cultch material, continue annual cultch planting operations and oyster monitoring programs, salaries and operational costs. The following table shows all funding sources by category.

**Table 2**

**Anticipated Funding For FY 2010/2011**

<b>Budget Center Name</b>	<b>Category</b>	<b>Anticipated Funding</b>
Oyster Rehabilitation	Annual cultch material (294,900 Bu)	\$435,554
Oyster Rehabilitation	Salaries and personnel services	\$930,479
Oyster Rehabilitation	Operating expenses/sanctuary support	\$681,182
	<b>Total</b>	<b>\$2,047,215</b>

Oyster Sanctuary Project (CRFL)	Class B Marl (9,000 Tons) (2010-2011)	\$371,800
Oyster Sanctuary Project (CRFL)	Class B Marl (9,000 Tons) (2011-2012)	\$458,200
Oyster Sanctuary Project (CRFL)	Operating expenses/sanctuary support	\$121,141
	<b>Total</b>	<b>\$951,141</b>

Oyster Sanctuary/Recycling	Salaries and personnel services	\$101,868
Oyster Sanctuary/Recycling	Operating expenses/sanctuary support	\$1,345,448
	<b>Total</b>	<b>\$1,447,316</b>

**Table 3**

**Combined Funds**

<b>Category</b>	<b>Anticipated Funding</b>
Annual cultch material/Class B Marl	\$1,265,554
Salaries and personnel services	\$1,032,347
Operating expenses	\$2,147,771
<b>Total</b>	<b>\$4,445,672</b>

**Table 4**

**2011 Cultch Planting Plans**

<u>County</u>	<u>Stockpile</u>	<u>Material Type</u>	<u>Bushels</u>	<u>Esti. Cost of Purchase and Transport</u>	<u>Estimated Cost per Bu</u>
Brunswick	Pigott Road	Oyster Shell- Recycled	3,000	\$0.00	\$0.00
		<b>Totals for Brunswick County</b>	<b>3,000</b>		
Carteret	South River	#4 marl	77,400	\$113,004.00	\$1.46
Carteret	South River	Oyster Shell - Recycled	10,000	\$0.00	\$0.00
Carteret	Core Creek	Oyster Shell - Purchased	10,000	\$16,000.00	\$1.60
Carteret	Cedar Island	#4 marl	5,000	\$7,500.00	\$1.50
Carteret	Cedar Island	Oyster Shell - Purchased	5,000	\$9,000.00	\$1.80
		<b>Totals for Carteret County</b>	<b>107,400</b>	<b>\$145,504</b>	
Dare	Wanchese	#4 marl	11,500	\$23,000.00	\$2.00
Dare	Wanchese	Oyster Shell - Purchased	20,000	\$28,200.00	\$1.41
Dare	Wanchese	Oyster Shell - Recycled	2,000	\$0.00	\$0.00
		<b>Totals for Dare County</b>	<b>33,500</b>	<b>\$51,200</b>	
Hyde	Swanquarter	#4 marl	109,000	\$185,300.00	\$1.70
		<b>Totals for Hyde County</b>	<b>109,000</b>	<b>\$185,300</b>	
Onslow	Camp Lejeune	Oyster Shell - Purchased	20,000	\$29,400.00	\$1.47
Onslow	Morris Landing	Oyster Shell - Purchased	5,000	\$6,600.00	\$1.32
Onslow	Morris Landing	Oyster Shell - Recycled	2,000	\$0.00	\$0.00
		<b>Totals for Onslow County</b>	<b>27,000</b>	<b>\$36,000</b>	
Pamlico	Hobucken	#4 marl	5,000	\$7,550.00	\$1.51
Pamlico	Hobucken	Oyster Shell - Purchased	10,000	\$10,000.00	\$1.00
		<b>Totals for Pamlico County</b>	<b>15,000</b>	<b>\$17,550</b>	
		<b>Est. Totals Purchased</b>	<b>277,900</b>	<b>\$435,554</b>	<b>\$1.57</b>
		<b>Est. Recycled Oyster Shell</b>	<b>17,000</b>		
		<b>Total</b>	<b>294,900</b>		

It is estimated that 277,900 bushels of cultch material costing approximately \$435,554 can be obtained with an average cost of \$1.57 per bushel.

Oyster sanctuary deployment will continue for the 2010/2011 fiscal year with deployments on the coastal fishing reef/oyster sanctuary located in Pamlico Sound near Gibbs Shoal.

The proposed enhancement activities will continue to incorporate the recommendations from the Oyster Fishery Management Plan. The recommendations relating to enhancement activities will be addressed as follows:

1. The DMF will continue to hold and encourage participation in cultch planting meetings and incorporate enhancement activities to minimize effects of management actions. Efforts are proceeding to establish expanded hand harvest areas.
2. The existing policy to limit the number of new planting sites to 30 per year in the northern area has been formalized and will continue to be utilized.
3. The Oyster Shell Recycling Program will continue to expand to inland counties.
4. The Oyster Sanctuary Program will continue by making deployments on existing and new oyster sanctuaries, monitoring existing sanctuary structures, and investigating new locations for program expansion.